

**USAF DENTAL EVALUATION AND CONSULTATION SERVICE
Detachment 1, USAF School of Aerospace Medicine
Ft. Sam Houston, TX 78234**

FINAL PROJECT REPORT

**Amalgam Separator Survey
(AFMOA Directive)**

**25 Mar 2014
(Updated 3 Jul 14)**

Project #14-002

OBJECTIVE: Conduct a survey to determine which Air Force dental clinics have installed amalgam separators that are ISO 11143 compliant. In addition, information was sought on the type of separator and date of installation. For those clinics that did not have amalgam separators in place, information was requested on whether or not there were plans for future installation of these units.

DATES OF SURVEY: Nov 2013 – Jul 2014

EVALUATORS: Lt Col Kelli Mack, Ft Sam Houston, TX; Col Salvador Flores, Ft Sam Houston, TX.

INTRODUCTION: Mercury contamination of water is a concern due to its bioaccumulative toxic nature. Increasing concern of this threat has led to a nationwide effort to reduce mercury contamination of publicly owned water works (POTW). The American Dental Association (ADA) provides guidance documents for its members and the general public for the management and disposal of dental amalgam and amalgam waste. These include information regarding proper recycling of amalgam waste and practical guidelines for integrating best management practices (BMPs) into dental practices. On October 2, 2007, the ADA updated its BMPs to consider the use of amalgam separators. The USAF Dental Corps followed suit and published several policy letters underscoring adherence to the ADA BMP's including the recommendation that all clinics consider the installation of one of these devices as part of an overall amalgam waste management program. In Nov of 2013 the Air Force Dental Operations Dental Directorate (AFMOA/SGD) tasked the Dental Evaluation and Consultation Service (DECS) to obtain information on the status of amalgam separator use in US Air Force dental clinics. In response, DECS designed a questionnaire to determine which Air Force dental clinics have installed amalgam separators that are ISO 11143 compliant. In addition, information was sought on the type of separator and date of installation. For those clinics that did not have amalgam separators in place, information was requested on whether or not there were plans for future installation of these units

METHODS AND MATERIALS:

A questionnaire was developed and sent to 81 AF CONUS and OCONUS dental clinics. The survey sought information on the status of amalgam separators in each facility. All 81 of the dental clinics responded and the results are listed below:

RESULTS: Survey Evaluation: The survey was sent to 81 different dental clinics with 81 of the clinics responding. The results are listed below:

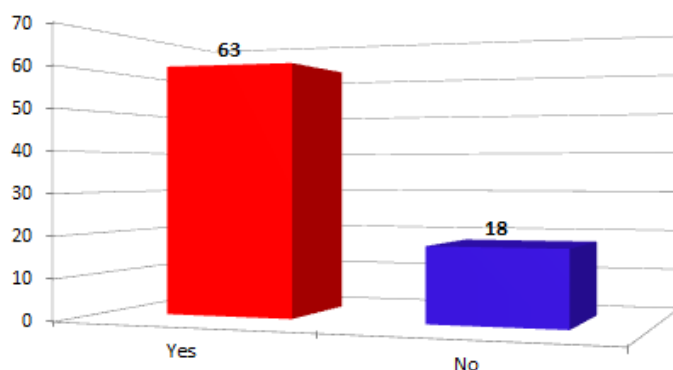
1. Are you using an amalgam separator unit?

Yes
63

No
18



1. Are you using an amalgam separator unit?



YES:

Academy (CO)	Fairchild (WA)	Luke (AZ)	Peterson ADL (CO)
Andersen (GU)	F E Warren (WY)	Malmstrom (MT)	Ramstein (GER)
Andrews (DC)	Geilenkirchen (GER)	Maxwell (AL)	Randolph (TX)
Aviano (IT)	Goodfellow (TX)	McChord (WA)	Robins (GA)
Barksdale (LA)	Grand Forks (ND)	McConnell (KS)	Schriever (CO)
Beale (CA)	Hanscom (MA)	McGuire (NJ)	Scott (IL)
Bolling (DC)	Hickam (HI)	Menwith Hill (UK)	Seymour Johnson (NC)
Cannon (NM)	Hill (UT)	METC (TX)	Shaw (SC)
Charleston (SC)	Kadena (JP)	Minot (ND)	Sheppard (TX)
Croughton (UK)	Kirtland (NM)	Misawa (JP)	Spangdahlem (GER)
Davis Monthan (AZ)	Kunsan (KOR)	Moody (GA)	Vandenberg (CA)
Dover (DE)	Lackland (TX)	Mountain Home (ID)	Whiteman (MO)
Dyess (TX)	Lajes (PT)	Nellis (AZ)	WPAFB (OH)
Eglin (FL)	Laughlin (TX)	Osan (KOR)	Yokota (JP)
Eielson (AK)	Little Rock (AR)	Patrick (FL)	Bitburg (GER)
Elmendorf (AK)	Los Angeles (CA)	Peterson (CO)	

NO:

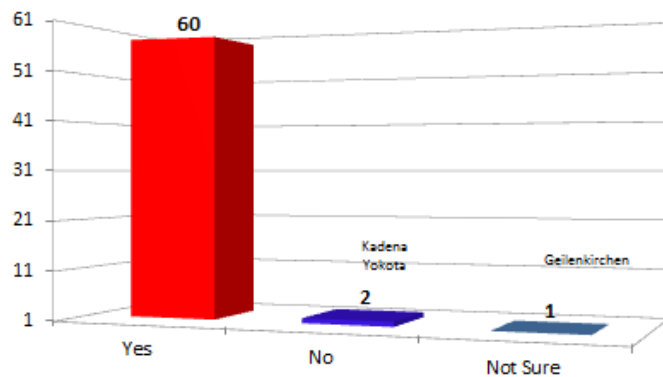
Alconbury (UK)	Holloman (NM)	Langley (VA)	Pope (NC)
Altus (OK)	Hurlburt Field (FL)	Macdill (FL)	Tinker (OK)
Columbus (MS)	Incirlik (TR)	Mildenhall (UK)	Tyndall (FL)
Edwards (CA)	Keesler (MS)	Offutt (NE)	Vance (OK)
Ellsworth (SD)	Lakenheath (UK)		

2. If you have an amalgam separator unit, does it conform to ISO 11143 standards?

Yes	No	Not Sure
60	2	1



2. If you have an amalgam separator unit, does it conform to ISO 11143 standards?



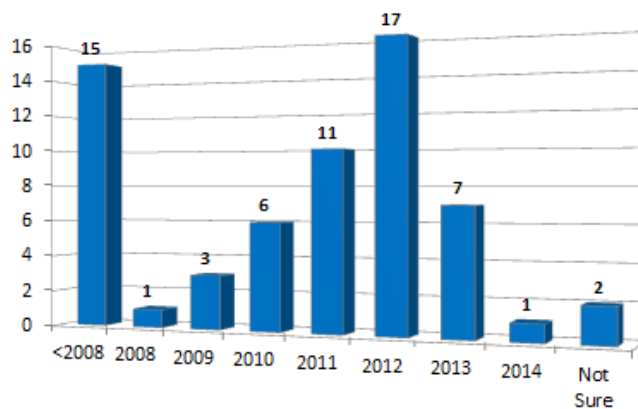
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3. For clinics that do have an amalgam separator unit, what year was it installed?

<2008	2008	2009	2010	2011	2012	2013	2014	Not Sure
15	1	3	6	11	17	7	1	2



3. For clinics that do have an amalgam separator unit, what year was it installed?



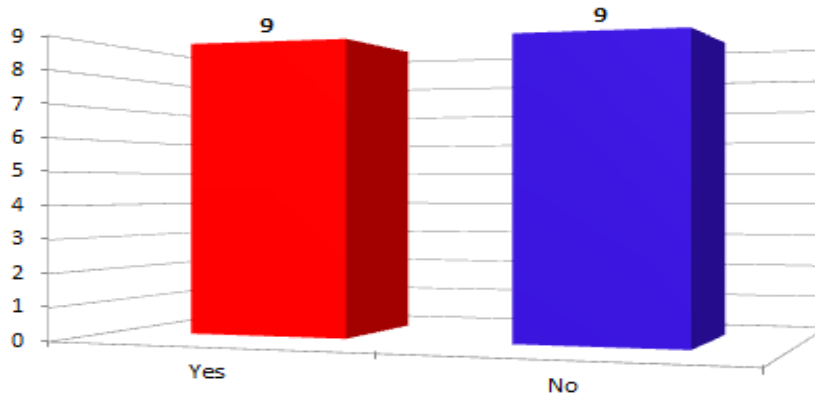
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4. If you DO NOT have an amalgam separator unit installed at the present time, do you plan on purchasing one in the future?

Yes	No	NA
9	9	63



4. If you DO NOT have an amalgam separator unit installed at the present time, do you plan on purchasing one in the future?



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YES

Altus
Columbus
Ellsworth
Holloman*
Hurlburt Field
Keesler
Offutt
Tyndall
Vance

NO

Alconbury
Edwards
Incirlik
Lakenheath
Langley
Macdill
Mildenhall
Pope
Tinker

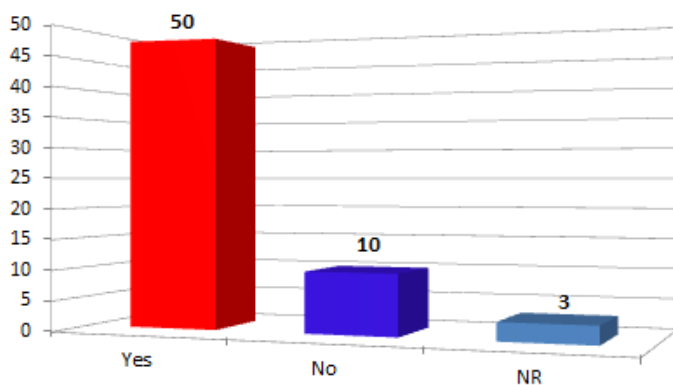
*Unit has been ordered

5. Do you or your facility monitor the unit's effectiveness?

Yes	No	NR
50	10	3



5. Do you or your facility monitor the unit's effectiveness?



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6. Which amalgam separator do you have? (Manufacturer/Model Number)

NAME	#	NAME	#
SolmeteX Hg5/Hg5 HV	25	AB Dental	1
DRNA BU10/30	16	Acadia	1
CatchHG 1000/ Rebec	4	Air Techniques	1
RAMVAC	1	Central Unico	1
Duerr AZ 100-7800	3	Midmark	1
Liberty BOSS	2	Local Japanese unit	1
Cattani Turbo	2	Rash 980	2
The Amalgam Collector	1	NR	1
		NA	18

7. Is the separator installed chairside or centrally located for all the units?

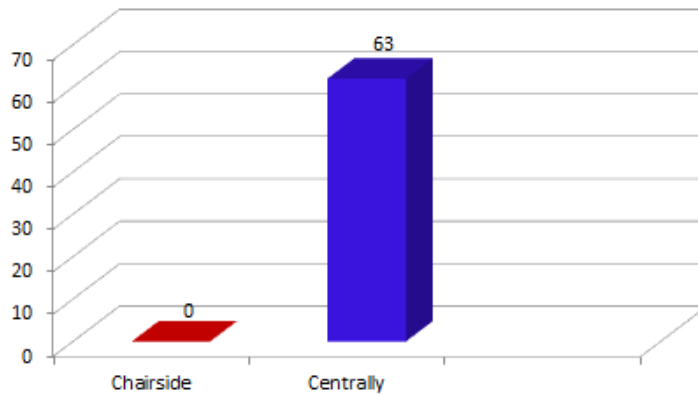
Chairside
0

Central
63

NA
18



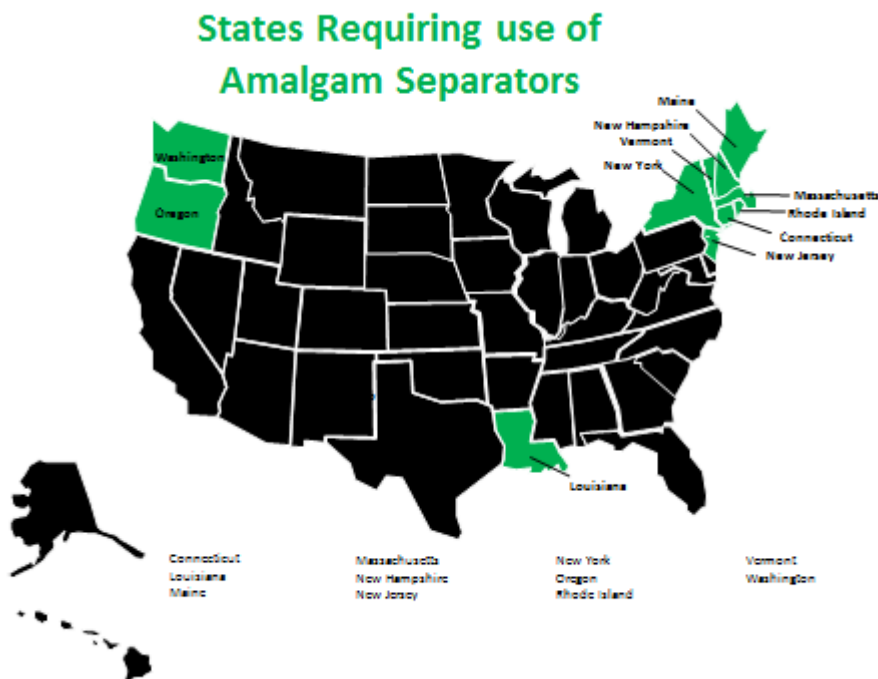
7. Is the separator installed chairside or centrally located for all the units?



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DISCUSSION:

Although there is no Federal requirement to date for the mandatory use of amalgam separators, Eleven states have made this a requirement. To complicate issues further, some municipalities within certain states may require the use of a separator even though the state does not require it. Our current best guidance is that clinics should investigate whether their state or municipality requires the use of an amalgam separator.



The EPA has examined the potential to make this a Federal requirement and has pushed for voluntary adherence to the “Best Amalgam Practices” published by the American Dental Association. This guidance published in 2008 recommends but does not yet mandate the use of amalgam separators as a federal requirement. You should follow the guidelines set by your state and municipality. The United States Air Force has published several Policy Letters calling for adherence to the Best Amalgam Practices and has recommended that clinics consider installing a device that is ISO 11143 compliant as part of an overall amalgam waste management program. To date (July 2014) there is no official published DoD requirement for the installation of amalgam separators. All clinics located in the 11 states requiring amalgam separators have a separator installed.

Of the 81 clinics, 81 responded to the survey. Of the 81 respondents to the survey, 63 were using amalgam separators and all but two were ISO 11143 compliant. The two separators that did not comply were separators purchased from the local Japanese economy. Of the 18 that did not have an amalgam separator, 9 planned to install one in the future. Of those clinics that had amalgam separators, all were centrally located and 50 of the 63 stated they monitored the units’ effectiveness. Of the 63 amalgam separators, the most commonly used were the Solmetex Hg5 (25), DNNA BU 10/30 (16), Catch HG 1000 (4) and the Duerr AZ 100-7800(3)

DECS Position: All clinics should strive to adhere to the Best Amalgam Practices and consider installing an ISO 11143 compliant amalgam separator. The Amalgam Separator Synopsis available on the DECS website lists a number of different amalgam separators available along with guidance to assist when making a purchase. [ADA Best Management Practices for Amalgam](#)